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16 OCTOBER 1986

# USSR Report

AGRICULTURE

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16 OCTOBER 1986

USSR REPORT  
AGRICULTURE

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### SPRING FIELD WORK IN KUBAN SURVEYED

Moscow PRAVDA in Russian 4 Apr 86 p 2

[Article by K. Aksenov, correspondent]

[Excerpt] Although spring has brought many surprises to the Kuban, the winter crops have not been damaged. Careful preparations for planting had their effect. Party, soviet and agricultural organizations thoroughly introduced collective contracts and cost accounting. They are being mastered by essentially all links and brigades. Output and its production cost have become the basic measure for the earnings of managers and field workers.

Kuban growers are almost completely finished with grain planting. The work front has now shifted to rice paddies, corn, sunflowers and vegetables. There is also much concern about the winter crops. In the past five-year plan the state was shorted 2.2 million tons of grain. There were reductions in deliveries of high grade and strong wheat. Among the reasons are errors in determining cropping structure.

More than 1.3 million hectares of wheat are now grown by intensive technology. Kuban growers expect to gather 38 quintals per hectare and supply the Motherland's granary with more than 4 million tons of grain. Most of the wheat sold is to be strong and high grade varieties. Many managers of farms, brigades and links are striving to overfulfill the target and make up for shortages in recent years. Crops were top-dressed in an organized manner. Almost half the fertilizers were applied by ground equipment, as they say, under the roots. About 1,000 liquid fertilizer tanks and 5,000 sprayers were prepared.

About 90,000 machinery operators combined into links and brigades on cost accounting are working on Kuban fields. They all have the same goal -- to achieve a marked growth in yields in the first year of the five-year plan.

11574

CSO: 1824/289

## MAJOR CROP PROGRESS AND WEATHER REPORTING

### CROP WORK IN KUBAN SURVEYED

Moscow SELSKAYA ZHIZN in Russian 15 Mar 86 p 1

[Article by Yu. Semenenko, correspondent: "Care for Winter Crops"]

[EXCERPTS] Kuban growers are ever more actively engaged in spring work on the fields. They are fully resolved to do everything necessary to grow a good harvest on every hectare in the first year of the new Five-Year Plan and to give the Motherland more grain.

Specialists from kray and oblast agro-industrial committees, RAPO and scientists visited the farms. Together with agronomists they scrupulously analysed the condition of winter crops on each field. This helps them make an accurate "diagnoses" and then use differentiated measures.

M. M. Vasyutin, chief of the Laboratory for Varietal Agrotechnics at the Krasnodar NII for Agriculture imeni P. P. Lukyanenko explained it thusly:

"It is important not to lose an hour during the spring vegetative growth of wheat and barley. Without this it is difficult to count on increasing the average yield in the Kray to 38 centners per hectare and increasing gross harvest to 8.5 million tons. Timely top-dressing acquires special importance. In the wintertime wheat and barley periodically emerge from dormancy and the plants use up nitrogen and other nutrients. This is why we have already top-dressed more than 1.2 million hectares of winter crops.

Various methods for assuring plant hardiness are used in the Kray. On farm fields during these days one can see many of the so-called hotbeds -- wooden frames covered with plastic film. Thanks to these very simple devices specialists can precisely determine winter crop condition at any time. Good results are also given by analyzing the degree tillering node staining or aftergrowth.

Aircraft or ground equipment are used to apply fertilizers to 45,000-50,000 hectares in the Kray in a day. Many farms are applying second top-dressings.

Rayon agro-industrial associations have a decisive word in the struggle against diseases. Unfortunately, they are still working too timidly and are only loosely linked to agricultural meteorological services and farms. This reduces their role in predicting the plant health situation. In Kushchevskiy, Kalininskiy, Novopokrovskiy and Beloglinzkiy rayons they did not suppress rodents at the right time. There was extensive damage to crops.

In general, protective measures are better than last year. Crops are treated against mice in all regions where it is needed. At the majority of kolkhozes and sovkhozes bacterial preparations and poison baits are being applied for the second and third time. Insecticides and fungicides are being used to eliminate pests and diseases.

The Kuban grain growers value every spring hour.

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CSO: 1824/289

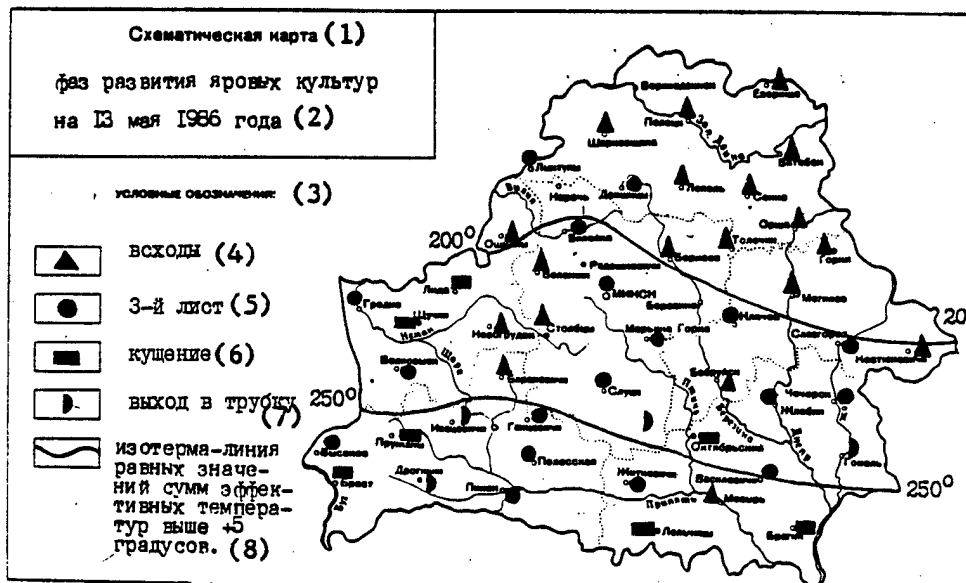


## MAJOR CROP PROGRESS AND WEATHER REPORTING

### CROP PROGRESS, WEATHER CONDITIONS IN BELORUSSIAN SSR

Minsk SELSKAYA GAZETA 14 May 86 p 1, 17 May 86 p 1, 21 May 86 p 1, 24 May 86 p 1, 29 May 86 p 1, 4 Jun 86 p 1, 7 Jun 86 p 1, 11 Jun 86 p 3, 19 Jun 86 p 4

Crop and weather reports for select days with accompanying maps



Key:

- |   |   |
|---|---|
| 1. Schematic map  | 6. Tillering  |
| 2. Developmental phases for spring crops on 13 May 1986 | 7. Shooting   |
| 3. Legend:  | 8. Isotherm-line of equal values for total amount of effective temperatures higher than + 5 degrees |
| 4. Seedlings  |   |
| 5. Third leaf   |   |

Text At the present time, the republic is experiencing warm weather with brief showers. The average daily air temperature exceeds the norm by 1-4 degrees and during the day the air warms to 17-22 degrees. Since the beginning of the growing season, the amount of effective heat has been greater than the norm by 70-120 degrees and amounts to 170-280 degrees.

The rain which fell improved the moisture conditions for the agricultural crops, especially with regard to light-textured soils. The stalks of the winter crops are continuing to grow and in the extreme southern portion of Brest Oblast, one

week earlier than usual, the heading of the winter rye has commenced. Its height in the southern part of the republic is 30-45 and in the northern section -- 15-25 centimeters. The seedlings of spring crops sown during the first 5-day period in May have appeared in the northern rayons. In the south, on sowings carried out prior to 20 April, tillering is in progress and stalk growth has commenced in some areas in Brest and Gomel oblasti after 2-4 days (compared to a norm of 6-8 days). Flax and corn seedlings appeared 8-12 days following sowing. The orchards are blossoming in all areas and in the southern rayons they have already finished blossoming.

Flax fleas are causing great damage to the flax in several farms. The republic's chemical service must organize local applications against these pests at the first appearance of the shoots; when their numbers exceed 20 specimens per square meter intensive treatments must be conducted.

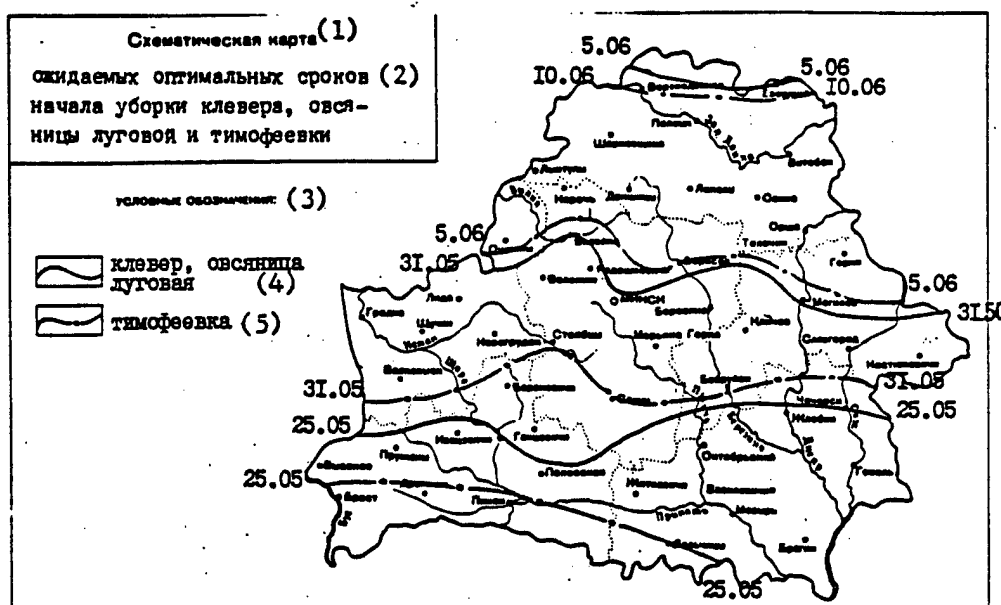
In the southern regions of the republic, the flax sowings are in the "herringbone" design phase. This is the best period for carrying out chemical treatment against weeds using herbicides. Importance is attached to carrying out this work in a timely and high quality manner and using only spray boom equipment.

In connection with the favorable weather conditions that have developed, the mass infestation of beet sowings by carrion beetles and beet fleas is expected. The number of beetles in the crops is still low, but once there are two or more specimens per square meter protective measures must be carried out.

The flight of the timothy fly has commenced in all areas and in the southern and central zones their number exceeds the threshold value. The timothy seed sowings must be inspected on an urgent basis and treatments aimed at combating the pest must be organized.

The best periods for carrying out grassing and regrassing work on haying and pasture lands are being overlooked in many rayons. By 10 May, radical improvements had still not been carried out and not one hectare had been regrassed on farms in Baranovichskiy, Verkhnedvinskiy, Gorodokskiy, Lioznenskiy, Rossonskiy, Sennenskiy, Sharkovshchinskiy, Belynichskiy, Goretskiy, Klichevskiy, Krasnopol'skiy, Mstislavskiy, Khotimskiy, Chaus'skiy, Cherikovskiy or Shklovskiy rayons. For the purpose of obtaining full-value feed lands and in the interest of increasing feed production for next year, grassing and regrassing work should be carried out during the best periods and completed prior to 1 July.

[17 May 86]



**Key:**

- |   |                          |
|---|--------------------------|
| 1. Schematic map  | 3. Legend:               |
| 2. Optimum periods expected for commencing the harvest of clover, meadow fescue and timothy | 4. Clover, meadow fescue |
|   | 5. Timothy               |

A predominance of warm weather has accelerated the development of clover and sown cereal grasses. In a majority of the republic's rayons, stem growth in clover has commenced roughly 10-15 days earlier than usual. In the south, the optimum periods for harvesting cock's foot will commence within the next few days. The heading of this crop is about to take place here and in some areas in Brest and Gomel oblasts it has already occurred. In the central rayons, the harvesting of cock's foot will become possible on 25 May and in the north -- on 30 May.

Immediately following the cock's foot, the harvesting of clover and meadow fescue will become possible. The mass formation of racemes and the tasseling of panicles will commence in these crops. The onset of these phases in the southern rayons is expected from 20-25, in the central rayons -- 25-31 May and in the northern part of the republic -- during the first 5-day period in June. The optimum periods for harvesting timothy will arrive roughly one week later.

This year the commencement of the grass harvesting work is expected to occur mainly during periods close to those for last year and 7-10 days earlier than the average established over a period of many years. The procurement of feed during the best periods will serve to ensure its high quality and will promote the active aftergrowth of the grasses following mowing.

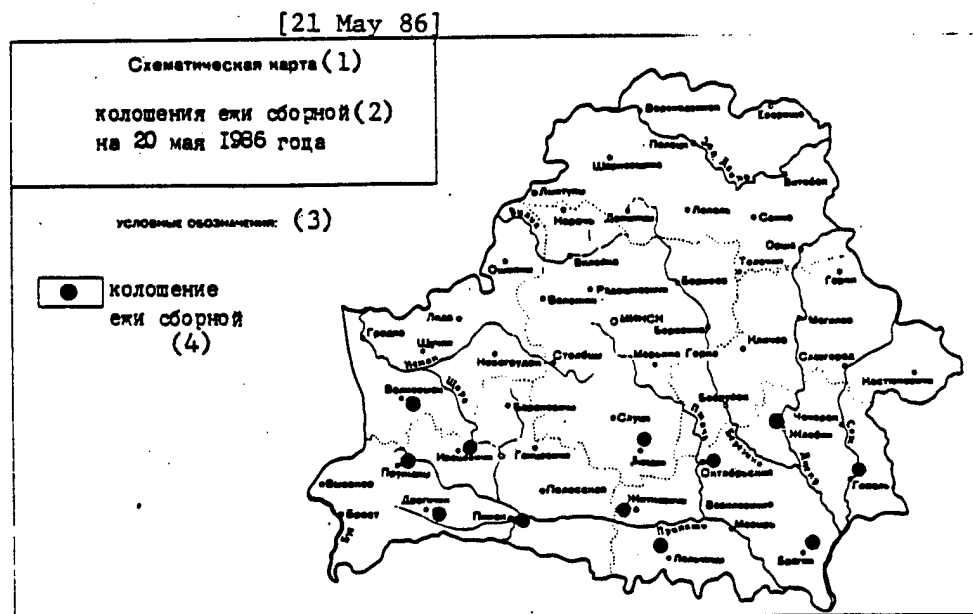
Waiting for the grass tracts to "build up" is completely unacceptable, since this leads to rapid aging, it lowers the nutritional value of the grass and it reduces the possibility of obtaining full-value second and third cuttings. In view of the moisture supplies in the soil at the present time and with timely harvesting work, an application of 45-60 kilograms of active nitrogen agent per hectare of cereal grasses, immediately following the first cutting, will make it possible to obtain a fine second cutting.

The mowing of meadow clover seed plants should be carried out prior to 5 June regardless of the phase of development or the height of the stalks.

A primary obligation of each individual participating in this work is that of strictly observing the technological requirements for harvesting grasses and preparing hay, haylage, grass meal and silage from them. At the present time, special concern should be shown for the potato fields and corn plantations. Roughly 7-8 days following the first inter-row cultivation of potatoes, the second should be carried out in the reverse direction, with weeds being destroyed on slopes and on the upper portion of ridges. Care should be taken to ensure that the potato plants and root systems are neither moved nor injured.

In the case of sugar beet sowings, importance is attached to not overlooking the periods for carrying out the first inter-row treatment (blind cultivation) and in the southern part of the republic -- the formation of an optimum plant density. The chief methods for tending corn sowings at the present time are pre-sowing and post-sowing harrowing and inter-row cultivations.

Pulse crop sowings (peas, vetch, maple peas and others) are threatened by sweetclover weevils, especially in the central and southern rayons, where on some fields their numbers exceed the threshold value and require the immediate carrying out of insecticide treatments.



Key:

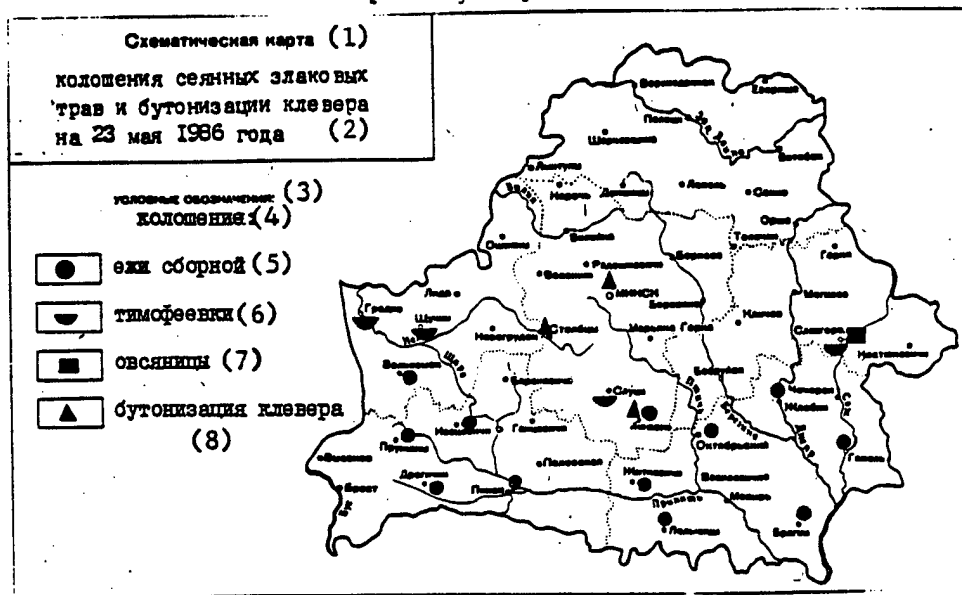
1. Schematic map
2. Heading of cock's foot on  
20 May 1986

3. Legend:
4. Heading of cock's foot

Last week the republic experienced unstable weather. Brief showers occurred in all areas. The accelerated development of agricultural crops noted since the beginning of the growing season is continuing. In a number of rayons in Brest, Gomel and in the southern parts of Grodno and Minsk oblasts the winter rye is already heading, thus exceeding the usual schedules by one to one and a half weeks. The principal tracts of spring crops are bushing out. Cool weather is promoting this process. In the southern rayons, stem growth has commenced among the spring crops. In some areas in Brest and Gomel oblasts, potato seedlings have appeared which were planted prior to 25 April. The sugar beet and corn seedlings broke through the soil 10-14 days following sowing. The April sowings of flax are in the stem growth phase. The heading of cock's foot has commenced in some areas in Brest, Gomel and in the southern portions of Grodno and Minsk oblasts, that is, the optimum periods are at hand for harvesting this crop.

The rain which fell improved the availability of moisture for the agricultural crops. As of 18 May, the arable soil layer contained 20-50 and the 1-meter layer -- 100-150 millimeters of productive moisture. In some rayons in the southern part of the republic, the moisture supplies in light-textured soils are limited: in the arable layer 10-15 and in the 1-meter layer -- 45-50 millimeters.

[24 May 86]



Key:

- |  |                      |
|--|----------------------|
| 1. Schematic map   | 5. Cock's foot       |
| 2. Heading of sown cereal grasses and budding of clover on 23 May 1986 | 6. Timothy           |
| 3. Legend:   | 7. Fescue            |
| 4. Heading   | 8. Budding of clover |

The dry weather has brought about a reduction in the supplies of productive moisture for the agricultural crops, especially in soils of a light mechanical structure. In a number of southern rayons, these supplies are low and amount to 20-30 millimeters in the one half meter layer and 10-15 millimeters in the arable soil layer.

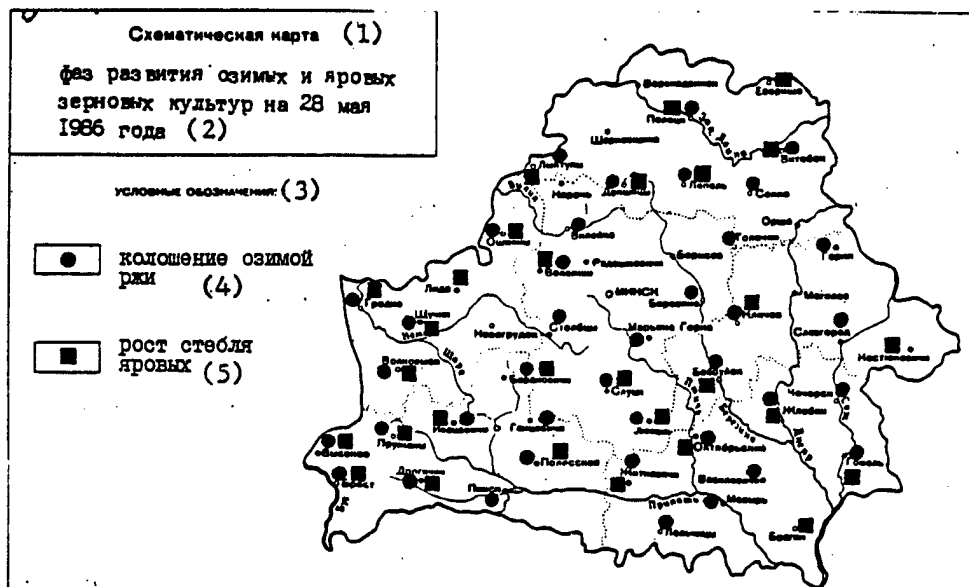
At the present time, the ears are forming on the principal tracts of winter rye. Premature yellowing of the leaves of the lower canopy and a drying out of the tillering shoots are being observed in this crop in some areas in Gomel, Brest and in the southern portions of Grodno and Minsk oblasts. Stem growth is being observed in spring crop sowings in a majority of rayons in the southern portion of the republic and this is 5-10 days earlier than last year. The height of the plants is 15-20 and in rayons with insufficient moisture -- approximately 5-10 centimeters. Plant diagnosis work should be carried out on such sowings and a top dressing of nitrogen should be applied in those areas where required.

In the central part of the republic, the sowings of barley and oats are completing their tillering phase. In the south, the flax has reached its herringbone pattern phase. The agrochemical service of Selkhozkhimiya and the kolkhozes and sovkhozes must activate weed control operations in behalf of these crops and it should be carried out using only spray boom equipment.

In a number of areas, seedlings have appeared on sowings of sugar and fodder beets, potatoes and corn. Inter-row cultivations should be organized for these crops. Density formation work should be carried out during the phase of two true beet leaves. The development and degree of harm caused by carrion beetles on beet sowings and the Swedish fly on spring grain crops should be monitored and treatments carried out when the threshold numbers of the pests are reached.

Cereal grasses in the southern portion of the republic have commenced heading. Rape has commenced blossoming in the south. The height of the grasses is 20-40 and that of clover -- 30-45 centimeters. In the southern rayons, timothy and alfalfa have reached 60 centimeters in height. During the heading phase, the cereal grasses will contain their greatest amount of nutrients. Thus the feed harvesting and procurement work should be started immediately. The sowings of meadow clover have entered the budding phase. In order to obtain high quality dehydrated feed, the work of procuring grass meal must be started.

[29 May  
86]



Key:

1. Schematic map
2. Developmental phases for winter and spring grain crops for 28 May 1986

3. Legend:
4. Heading of winter rye
5. Stem growth in spring crops

There was rainfall in all areas of the republic on 25 May. However, it was brief and light in nature, especially in the eastern half. Just as in the past, the moisture supplies for the agricultural crops continue to be low in the southeastern part of the republic.

At the present time, winter rye is heading in almost all areas and in the extreme southern portion of Gomel Oblast it has commenced blossoming 10 days earlier than usual. Stem growth in the spring crops has commenced in the central and northern rayons and the lower stem node has been observed in some areas in the southern portion.

These sowings should be inspected and the plants treated with fungicides -- Bayleton or Tilt in a dosage of 0.5 kilograms per hectare -- upon the observance of powdery mildew or rust in the winter crops or helminthosporiosis blight in the barley sowings.

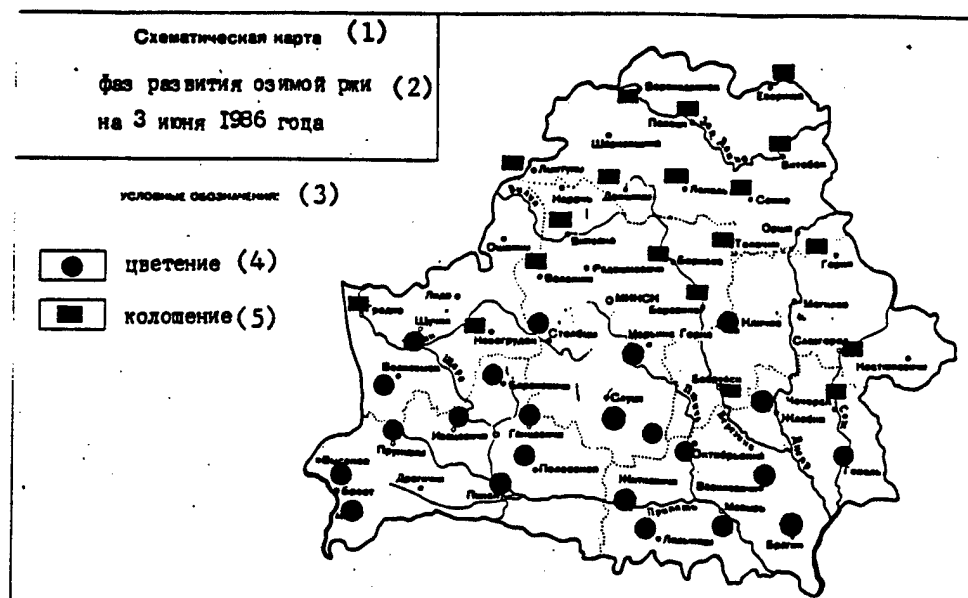
The third leaf has appeared on corn sown prior to 10 May, while later sowings are in the seedling phase. Buckwheat has sprouted in the south just 1 week following sowing. Potato seedlings have appeared in a majority of the rayons in the southern part of the republic and in some areas in the northern part. The formation of lateral shoots has commenced in some southern rayons.

The best periods are at hand in all areas for carrying out weed control work and for thinning the food root crops -- a most important operation with regard to the tending of these crops. Considerable importance is attached to carrying out this work rapidly within 6-8 days and in a manner such that 4-5 plants remain per linear meter. It must be remembered that each day's delay in carrying out the weed control and thinning work can lower the root crop yield by 15-17 quintals per hectare. This applies particularly to farms in Brest and Minsk oblasts, where tending of the root crops is proceeding very slowly.

Post-seedling harrowing should be carried out on corn sowings during the phase of 3-4 leaves and particularly on permanent tracts (single-crop system) at a speed for the unit of not more than 5 kilometers per hour. Inter-row cultivations should be carried out as the soil becomes more weedy and more packed. In zones having insufficient moisture, a reduction has taken place in the action of soil herbicides applied following the sowing of corn and thus auxiliary herbicides should be employed as the sowings become contaminated with annual weeds.

The moisture shortage in a number of rayons in Brest, Gomel and Grodno oblasts is restraining growth and development in the grasses. Thus, in order to compensate for the shortfall in grasses, the work of grassing and regrassing haying and pasture lands should be accelerated in all areas. Moreover, during the course of conducting such operations the sowing of grass should be carried out under a cover of annual leguminous and cereal mixtures and annual rye grass. This will make it possible to obtain a full-value crop from all areas this year. In particular, this work should be activated on farms in Gomel and Mogilev oblasts, where the workers have fallen considerably behind the schedule.

In like manner, each farm must uncover its low productivity tracts on bottom land, pastures and swamplands and sow them with annual mixtures, potatoes, corn cruciferae family crops and other crops for feed.



[4 Jun  
86]

**Key:**

1. Schematic map
2. Developmental phases for winter rye for 3 June 1986

3. Legend:
4. Blossoming
5. Heading

In a majority of rayons throughout the republic, this present summer began with warm, and in the southeast, hot weather. The average daily air temperature was 17-22 degrees, or 2-6 degrees higher than the norm. The maximum air temperature was 21-28 degrees. It was cool only in the western rayons. Here the average daily air temperature was 1-3 degrees lower than the average value established over a period of many years. Rain storms occurred in all areas.

Just as in the past, the sowings are developing in a rapid manner. Ears formed on the winter rye 5-8 days earlier than usual in the central and northern rayons of the republic. It has commenced blossoming in the second half. This is 7-10 days earlier than the average periods established over a period of many years and roughly one week earlier than last year. The height of the rye is 80-140 and in some areas 150-160 centimeters. The winter wheat is on the eve of heading and in some areas in the southern half ears have already formed on it. Stem growth continues on the sowings of spring crops and flax. The formation of lateral shoots on potato plants has commenced in a number of rayons in the southern half. The third leaf has appeared on corn sowings and in the southeast -- the 5th and 7th leaves.

The rain which fell has augmented the supplies of productive moisture in the soil and improved the availability of moisture for the agricultural crops.

Atmospheric humidity has increased. Favorable conditions have been created for the development of fungus diseases among the grain crops.

The crops should be inspected and the plants treated with fungicides -- Bayleton or Tilt in a dosage of 0.5 kilograms per hectare -- upon the



observance of powdery mildew or rust in the winter crops or helminthosporiosis blight in the barley sowings. Treatments should first of all be carried out on those barley varieties and seed production sowings considered to be most susceptible to these diseases.

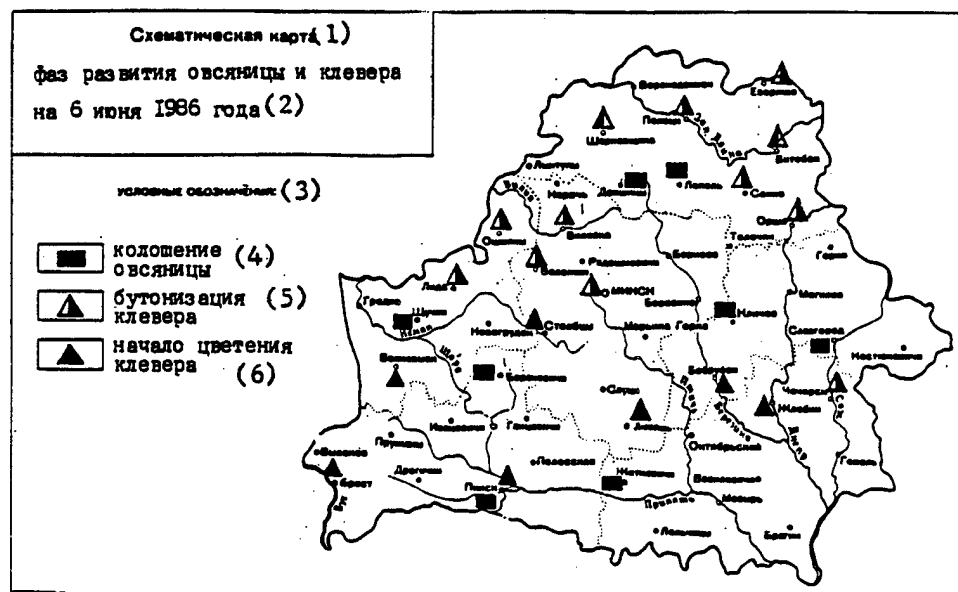
The Tilt fungicide is most effective against barley net blotch and spring wheat septoria spot. In all other instances, the effectiveness of Bayleton and Tilt is the same.

During the phase of 1-3 internodes, intensively cultivated sowings of spring wheat should be treated with retardants.

On fully tillered sowings of spring grain crops in the northern and eastern parts of the republic, applications of top dressings with the aid of plant diagnosis should be continued, monitoring of the development of grain crop pests should be organized and, when necessary, the crops should be given a top dressing of nitrogen fertilizers and treated with insecticides.

In the republic's southern rayons, the potato plants on areas which were the first to be planted have reached a height of 15-20 centimeters. During this phase of development, a preventive treatment of a 98 percent solution of blue vitriol should be carried out against phytophthora infection.

[7 Jun  
86]



Key:

1. Schematic map
2. Developmental phases for fescue and clover for 6 June 1986
3. Legend

4. Heading of fescue
5. Budding of clover
6. Commencement of clover blossoming

A chief task at the present time is that of intensifying the grass mowing rates. On a large portion of the republic's territory, the optimum periods for harvesting the early-ripening grasses have elapsed and in the northern

part they are coming to an end. They were harvested in a timely manner in a majority of areas. However the harvesting of early-ripening grasses has not been completed on a number of farms in Grodno and Mogilev oblasts. With each passing day, the delay in carrying out this work is lowering the quality of the feed. The harvesting of these grasses must be completed immediately.

The optimum periods for harvesting the midseason maturing grasses are at hand in all areas. Fescue and awnless brome grass are in the heading stage; budding is in progress and in the southern oblasts -- clover has commenced blossoming. These grasses must be harvested as rapidly as possible.

It must be remembered that each day of delay in harvesting them will result in great losses in nutrients and particularly in protein. Whereas at the beginning of heading the crude protein content in the fescue was 14 percent, by the beginning of blossoming it had decreased to 8 percent. Hence, if these grasses are not harvested within 3-4 days, the protein losses in the fescue, awnless brome grass and clover will amount to 35-40 percent.

However, some farm leaders and specialists are not placing a proper value on one important factor for raising the quality of feed being procured -- harvesting the grasses during the optimum phase. This work is being carried out extremely slowly on the grasslands. Thus, cock's foot is in the blossoming phase at the Lidskiy Sovkhoz in Lidskiy Rayon and yet the harvesting work has still not commenced. Meanwhile, a large amount of feed harvesting equipment remains idle. A similar situation prevails at the Niva Experimental Base in this same rayon.




Farms in the following rayons have fallen far behind in harvesting and stocking feeds: Zhabinkovskiy, Maloritskiy, Gantsevichskiy, Logoyskiy, Molodechnenskiy, Smolevichskiy, Chervenskiy, Chashnikskiy, Postavskiy, Glubokskiy, Dyatlovskiy, Voronovski and Lidskiy.

[11 Jun 86]

Схематическая карта (1)

фаз развития озимых и яровых  
зерновых культур на 10 июня  
1986 года (2)

УСЛОВНЫЕ ОБОЗНАЧЕНИЯ (3)

-  цветение озимой (4)  
ржи и пшеницы
-  рост стебля  
яровых (5)
-  колосшение ячменя,  
выметывание метелки  
у овса (6)



**Key:**

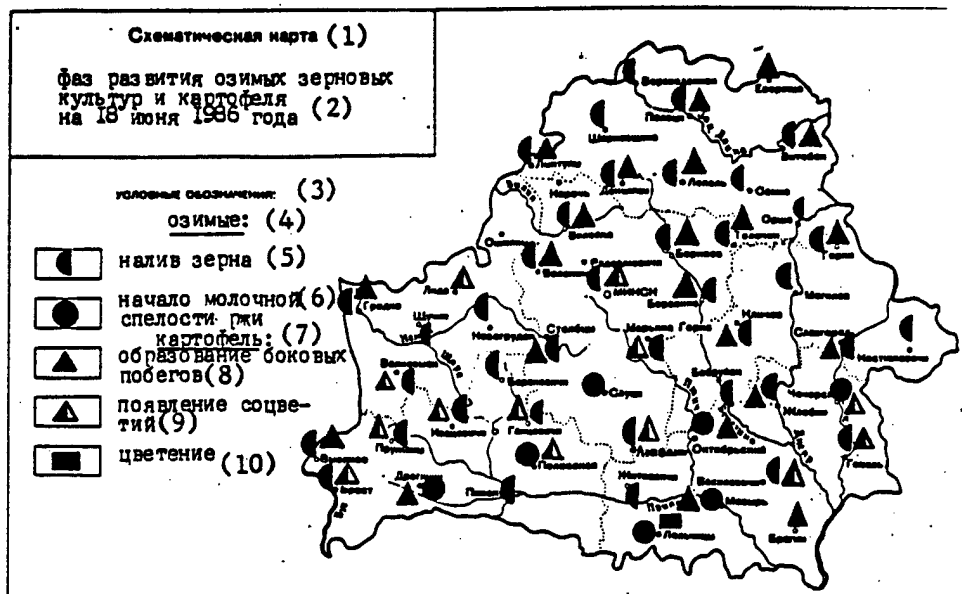
- |  |   |
|--|---|
| 1. Schematic map   | 4. Blossoming of winter rye and wheat             |
| 2. Developmental phases for winter and spring grain crops for 10 June 1986 | 5. Stem growth in spring crops                    |
| 3. Legend  | 6. Heading of barley, heading of panicles in oats |

Unstable weather was observed over a large part of the republic's territory during the last period in June. The average daily air temperature was mainly on the order of 12-17 degrees. Brief rainfall occurred in all areas. Roughly 1-2 norms of precipitation fell in a majority of the rayons. An improvement took place in the availability of moisture for the agricultural crops. As of 8 June, the one-half meter layer of soil contained mainly 50-100 millimeters of productive moisture. However, in the southeastern rayons, just as in the past, a raised temperature regime predominated. During the daytime hours, the air warmed to 24-29 degrees and a shortfall of precipitation was observed in some areas. Here the supplies of useful moisture remained low -- approximately 15-35 millimeters in the 0-50 centimeter soil layer.

Winter rye is blossoming almost in all areas and winter wheat has commenced blossoming in the southern half. Stem growth continues in the spring crops and flax. In the southern rayons, the heading of barley and the heading of panicles in oats began one week earlier than last year. The formation of lateral shoots is taking place in potatoes and the formation of racemes has commenced in the extreme southern portions of Gomel and Brest oblasts. The fifth through seventh leaves have appeared in the corn sowings.

At the present time, the farm agronomists and the agronomic and protective services of oblasts and rayons must carefully monitor the condition of the crops and the phytosanitary situation and they must undertake timely measures aimed at organizing inter-row cultivations of the row crops and carrying out measures for protecting grain crops against fungus diseases, while combining this work with applying top dressings to the plants based upon the results of plant diagnostics.

[19 Jun 86]



Key:

1. Schematic map
2. Developmental phases for winter grain crops and potatoes for 18 June 1986
3. Legend:
4. Winter crops:
5. Ripening of grain
6. Commencement of milky ripeness in rye
7. Potatoes:
8. Formation of lateral shoots
9. Appearance of racemes
10. Blossoming

The past week throughout the republic was characterized by very warm and mainly dry weather. The average daily air temperature exceeded the value established over a period of many years by 4-6 degrees and the maximum reached was 25-30 degrees. On some days in the southeast part of the republic, the temperature was 32 degrees.

Just as in the past, the development of the agricultural crops is proceeding in a rapid manner. The grain of winter sowings is swelling 10-15 days earlier than the average periods established over a period of many years in a number of southern rayons and by a week to a week and a half earlier than last year. The commencement of milky ripeness has been noted in the winter rye. Heading is being observed on the principal spring crop tracts. The formation of lateral shoots is taking place on the potato plants. In the southern half of the republic, racemes have appeared in the early ripening potato varieties and blossoming has commenced in the southwestern part of Gomel Oblast. The April sowings of flax have commenced ripening. Root crop growth has commenced in sugar beets sown in late April and early May. Roughly 7 to 9 leaves have formed on the corn sowings.

The kolkhoz and sovkhos agronomists and specialists of the plant protection service must carefully monitor the condition of the plants and the development of the pests and diseases and undertake timely protective measures. Fungicide treatments must be continued on the spring grain crops and prophylactic sprayings against late potato blight must be carried out on the potato sowings. The period for protecting cruciferae family crops must not be overlooked.

7026

CSO: 1824/372

## MAJOR CROP PROGRESS AND WEATHER REPORTING

### BRIEFS

KRASNODAR SPRING WORK--Spring crops have been sown on the first million hectares of the Kuban Steppe. The shoots of early spring grain and pulse crops are appearing. This year's planting has been accelerated through earlier and higher quality preparation of fields. [Text] [Moscow PRAVDA in Russian 19 Apr 86 p 2]. Spring crops have been sown on the first million hectares of the Kuban Steppe. The shoots of early spring grain and pulse crops are appearing. This year's planting has been accelerated through earlier and higher quality preparation of fields and the use of equipment in large groups. [Text] [TASS] [Moscow SOVETSKAYA ROSSIYA in Russian 19 Apr 86 p 4] 11574

STAVROPOL SPRING WORK--The planting of early spring grain and pulse crops is being completed at farms in Stavropol Kray. Next is the planting, using industrial technology, of corn, sugar beets and sunflowers. This year spring in Stavropol Kray was dry and late. With irresistible force, it put to work thousands of people responsible for the harvest's fate. It has been a long time since such tension was felt on the fields. [By S. Timofeyev] [Text] [Moscow SELSKAYA ZHIZN in Russian 27 Mar 86 p 1] Stavropol--Yesterday kolkhozes and sovkhoses in the Kray began the planting of early spring grain and pulse crops. [Text] [Moscow TRUD in Russian 22 Mar 86 p 1] 11574

STAVROPOL GRAIN CROP WORK--Field work in Stavropol is under way at ever broader scales. The volumes are great. Winter crops now occupy more than 1,600,000 hectares, more than half of which are planted by intensive technology. Spring grain crops must be planted on 1,300,000 hectares, within short deadlines and up to high quality standards. The restructuring now under way everywhere strengthens confidence in success. [Excerpt] [Moscow SOVETSKAYA ROSSIYA in Russian 4 Apr 86 p 1] 11574

STAVROPOL PLANTING -(TASS) (Apr 4)--Dry and biting spring winds are being opposed by the rapid and high quality work of Stavropol grain growers, who have completed the massive planting of early grain and pulse crops. As the soil warmed, the majority of kolkhozes and sovkhoses succeeded in planting barley, oats and peas in one and a half to two days. This is a result of coordinated action by agroprom agronomic and engineering services. Because of the weather, the preplanting preparations on most fields were done at night, substantially improving the productivity of tractor units and

and eliminating any flaws. The high speed schedule for planting in the Stavropol Steppe and piedmont is a very important requirement for moisture saving agronomic techniques. Grain planted in soil moistened by the spring thaw sprouts more quickly and the sprouts are more robust. [Text] [Moscow SELSKAYA ZHIZN 5 Apr 86 p 1] 11574

SPRING FIELD WORK IN NORTH OSETIA--Ordzhonikidze--All farms in North Osetia are ready for spring field work. Everywhere equipment has been properly repaired, first class seed for spring grain and feed crops has been prepared, working plans compiled and field support units equipped. The outfitting of 250 units on cost accounting has been completed at all farms. It is planned to work machinery crews in two shifts. [Text] [Moscow TRUD in Russian 13 Mar 86 p 1] Farmers in the steppe regions of North Osetia, who began field work on 17 March, are counting on the highly productive use of equipment. More than 200 mechanized units in which spring field equipment is concentrated are leveling and harrowing and doing moisture retention work. Oats, peas and perennial grasses are being planted in lands warmed up by the sun. Machinery operators have decided to plant early spring crops within shortened deadlines. [Text] (TASS) [Moscow SOVETSKAYA ROSSIYA in Russian 18 Mar 86 p 1] Cooperators in North Osetia began to service machinery operators planting spring crops. Today more than 200 mobile stores with highly needed goods began work on the spring planting schedule. [Text] (TASS) [Moscow SELSKAYA ZHIZN in Russian 23 Mar 86 p 1] 11574

ROSTOV FIELD WORK--The soil has warmed up under the spring sun's rays, and Don grain growers from the Kolkhoz imeni Dzerzhinskiy in Azovskiy Rayon have put 14 planting units to work. In 56 working hours they plan to plant 1,240 hectares, the total area devoted to early grain crops. Planting links and brigades in other rayons of Rostov Oblast's southern zone have also gone to work. Growers are especially concerned about winter crops, which this year occupy more than 2 million hectares. Intensive technology is being used on more land than last year. Crops are being carefully top-dressed; 600,000 tons more of organic fertilizers have been applied this year than last. The oblast agroprom places great hope upon the introduction of brigade cost accounting: almost 65 percent of arable land has been attached to contracted units. [Text] [Moscow IZVESTIYA in Russian 27 Mar 86 p 1] Rostov Oblast machinery operators are moving planting equipment into the fields. A. Shaporov, a brigade leader at the Zavety Ilichia Kolkhoz in Avovskiy Rayon could not hide his joy: "Recently we visited our neighbors on a mutual inspection, there were no complaints." He shows us an unusual machine. A tank and a pump with a meter are installed on the frame of a cultivator. He explains, "It is for applying liquid compound fertilizers. With the help of such units we no longer spray fertilizers, but apply them directly to the root zone." In order not to stretch out field work it was decided to work around the clock: planting in the day and applying fertilizer at night. Tractors were equipped with additional lights [By V. Bondarenko] [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 21 Mar 86 p 1] Machinery operators in the Don have begun the planting of spring crops. Yesterday growers in the southern rayons of Rostov Oblast brought planting units

out onto the fields. [Text] [Moscow TRUD in Russian 21 Mar 86 p 1]  
Grain growers in the oblast began the massive planting of spring crops.  
[Text] [Moscow TRUD in Russian 8 Apr 86 p 1] 11574

SPRING FIELD WORK IN DON--(Mar 27) (Rostov-na-Donu)--Spring field work is under way on the Don fields. This includes top-dressing and restoration of winter crops and perennial grasses, selective harrowing of fallow, cultivation and planting of early crops. Planting complexes are operating in Azovskiy, Matveyevo-Kurganskiy, Kagalnitskiy, Zernogradskiy, Yegorlykskiy, Tselinskiy and Salskiy rayons. At the same time work is being done on winter crops, they are being top-dressed and harrowing and restoration work is under way. So as not to miss optimal work times, workers at many farms are doing spring work at night. Two-thirds of the unirrigated cropland and more than 90 percent of the irrigated land in the oblast is now attached to growers working on collective contract. As of today, Don machinery operators have done moisture retention work on nearly a million hectares of fall-plowed and fallow fields, and top-dressed almost 600,000 hectares of winter crops, including 400,000 grown by intensive technology. They have also planted crops on the first few thousand hectards. [By Yu. Maksimenko [Excerpt] [Moscow SELSKAYA ZHIZN in Russian 28 Mar 86 p 1] 11574

NORTH CAUCASUS FIELD WORK--Machinery operators in southern Russia are already making test trips into the fields. Final preparations for planting are being made at farms. Special attention is given to areas on which intensive technology will be used. In the North Caucasus this will be the largest in recent years, more than 4 million hectares. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 21 Mar 86 p 1] 11574

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## LIVESTOCK

### REGIONAL LAG IN PRIVATE LIVESTOCK RAISING NOTED

Moscow SELSKAYA ZHIZN in Russian 1 Aug 86 p 2

[Article by M. Glinka: "Milk From the Private Plots"; Why Subsidiary Farms' Animal Husbandry Production is Not Growing"]

[Task/ An important task is that of supplying the population completely with valuable and diverse food products and this task is presently being carried out by workers attached to kolkhoz and sovkhoz farms and inter-farm enterprises. Their harmonious efforts have made it possible to achieve a considerable increase in the state purchases of products. Approximately 9.6 million tons of meat (in live weight) and 35.2 million tons of milk were purchased during the first 6 months. Naturally, the main portion of these products was supplied by kolkhozes, sovkhozes and other state agricultural enterprises. But a considerable contribution was made by the private plots of citizens. For example, more than 500,000 tons of livestock and poultry were purchased from the population (including products procured on the basis of contracts from kolkhozes and sovkhozes and milk purchases -- 3.2 million tons. The true contribution by the private plots towards augmenting the country's meat and dairy resources was obviously much greater: indeed a large portion of these products is used on the tables of these rural residents.

The party and government have handed down a whole series of decisions which serve to guarantee the stability of the private economy of citizens. These decisions clearly define the role played by private plots in overall agricultural production. They have made it possible to regulate the production of livestock products in this sector. It has increased noticeably and has stabilized at the level of approximately 4,800,000 tons of meat (in dressed weight) and 29 million tons of milk annually. In Moldavia, over the past 6 months, the purchases of livestock from the population increased by 78 percent, in Kirghizia -- by a factor of 1.5, in Tajikistan -- by 17 and in Armenia -- by 15 percent. Milk purchases in Kirghizia increased by 17 percent. A greater number of kolkhoz members and sovkhoz workers are concluding contracts with their farms for the sale of livestock products. Purchases of livestock and poultry on the basis of contracts have increased in Kazakhstan, Kirghizia, Turkmenia and Estonia and milk -- in the Ukraine, Belorussia, Kazakhstan, Lithuania and Kirghizia.

The party and soviet organs in Omsk Oblast are carrying out a great amount of work in connection with improving the population's ability to supply its own livestock products. The oblast and rayon food committees and the rayon and



municipal committees are exercising constant control over all questions concerned with developing the private plots of citizens. During the first 6 months, the Omsk Oblast Union of Consumer Cooperatives purchased 5,850 tons of meat from the population -- 750 more tons than the amount called for in the task. Roughly 4,300 tons of milk and 50 tons of butter were procured -- more by a factor of 2.5 than the amount procured during the first 6 months of last year.

However, in a number of areas there has been a reduction in the amount of attention being given to the private plots of the population. For example, there have been reductions in the purchases of livestock and poultry in a number of oblasts in the Russian Federation, the Ukraine and Belorussia and purchases of milk -- in Latvia and Estonia. Moreover, a noticeable reduction took place in the numbers of livestock on rural plots in Latvia. Generally speaking, one third of the families living in rural areas at the present time do not have livestock. As a result, the small purchases of livestock from the population by consumer cooperation declined during the first 6 months by 100 tons, with kolkhoz contractual purchases of meat down by 1300 tons and sovkhos purchases down by 1200 tons. Reductions also took place in milk purchases in this sector. And in the Armenian SSR, more than one half of the kolkhoz members and 40 percent of the sovkhos workers were not maintaining livestock at the beginning of this current year.

Unfortunately, many such examples can be cited. During the first 6 months of this year, consumer cooperation in a number of regions in the Mari autonomous republic did not conclude so much as one contract for the purchasing of livestock from the population and the sale of meat to city-dwellers declined. In Kaluga Oblast, the village soviets in Kuybyshevskiy and Duminichskiy rayons purchased 700-720 kilograms of milk per cow from local residents during the first 6 months and in Dzerzhinskiy, Medynskiy and Taruskiy rayons -- less than the above figure by a factor of two. Meat production on rural plots in Kuybyshev Oblast has declined by 7 percent in recent years; the number of hogs has decreased by 13,000 and sheep -- by 35,000 head. This year and compared to the level for last year, only 29 percent of the cattle here were purchased from the population and 28 percent of the hogs. One third of the private plots in the oblast generally have no animals whatsoever. Less meat is now being produced on the private plots in Pskov, Ryazan and Ulyanovsk oblasts and less milk -- in Leningrad and Yaroslavl Oblasts. Cattle purchases have declined in the Komi, Tatar and Tuva autonomous republics and in Kalinin, Orenburg and Novosibirsk oblasts and hogs -- in the Bashkir, Mari and Chuvash autonomous republics and in Vologda, Volgograd, Chelyabinsk and Sverdlovsk oblasts.

The chief reason for this situation is poor support for the private plots in the form of feed. The editorial board has received many alarming signals in this regard. For example, pensioner A.S. Lubov in the village of Tyuryukov of the Bunkovskiy Village Soviet in Ivanovo Oblast wrote in to say that the chairman of the local Rossiya Kolkhoz, Kapustin, refused to even discuss with him the matter of making haying land available. And indeed the Lubov family, during the month of June alone, delivered approximately 200 liters of milk to the kolkhoz's creamery in behalf of its plan. Is it not because of this attitude being displayed on the oblast's private plots that milk production is now less than it was 10 years ago? During the first 6 months of this year, the number of cattle purchased from the population was one third less than the figure for last year and in the case of hogs -- more than 60 percent less.

Unsatisfactory support in the form of young stock does nothing to promote the production of goods on rural private plots. Farms in the Lithuanian SSR have sold 17,000 fewer young pigs to the population than was the case last year. Thus the amount of pork produced in this sector will be at least 1,700 tons less than the figure for last year.

Difficulties encountered in the sale of surplus products often serve as the reason why rural residents refuse to maintain livestock on their private plots. "Milk is not needed, the sovkhos has fulfilled its plan" such was the statement heard by M.M. Matyukhin, a resident of the village of Achikulak in Neftekumskiy Rayon in Stavropol Kray. At the Sovkhos imeni Gorkiy in Chernskiy Rayon in Tula Oblast, no check is carried out on the fat content of the milk purchased from the population. The people are disturbed over this fact. It arouses in them a sense of uncertainty. Meanwhile, studies have shown that there is confidence in the fact that the concern displayed by a kolkhoz or sovkhos for rural private plots is not a temporary phenomenon but rather a permanent policy -- a chief stimulus for developing the private plot economy.

Obviously, the development of the private plots should in no way be held back by production growth in the public sector. And yet such incidents are being encountered. In Uritskiy Rayon in Orel Oblast, for example, 32 percent of the meat sold to the state came from livestock purchased from the population and yet some kolkhozes and sovkhos have ceased their practice of fattening animals. They are striving in this manner to correct the shortcomings of public livestock breeding at some kolkhozes in Gantsevichskiy, Stolinskiy and Ivanovskiy rayons in Brest Oblast and in Nesterovskiy Rayon in Lvov Oblast. Is it necessary to discuss the intolerable nature of such practice?

The development of the private plot economy requires public regulation so as to ensure that its volume is maintained within limits which will allow kolkhoz members and sovkhos workers to devote the main portion of their working time to public production. Thus active participation in public production must be the chief condition for ensuring that privately owned livestock are supplied with feed and for furnishing other assistance to the private plot economy.

7026

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## AGRO-ECONOMICS AND ORGANIZATION

### BELORUSSIAN PROCUREMENT PRICE SYSTEM EXPLAINED

Minsk SELSKAYA GAZETA in Russian 6 Aug 86 p 2

[Article by A. Gretskiy, chief economist, Agro-Industrial Complex Department, Belorussian SSR State Committee on Prices: "Price -- An Economic Lever"]

[Text] Each farm's profits depend upon many factors, but primarily upon sales volumes, procurement prices and markups for observing sales conditions. Thus, during the 11th Five-Year Plan farms in the republic were paid 50 percent markups over the procurement prices for the sales of all types of agricultural products above the average annual level attained in the 10th Five-Year Plan. In 1985 alone this earned them an additional 128 million rubles. For example, the Sovetskiy Pogranichnik Kolkhoz in Grodnenskiy Rayon received 244,000 rubles from markups on plant products, the Kolkhoz imeni Lenin in Grodnenskiy Rayon received 147,000 and the Kolkhoz imeni Sverdlov in Zhlobinskiy Rayon 180,000 rubles. At the same time, the Kolkhoz imeni Zhdanov in Zhlobinskiy Rayon did not receive a single kopeck. This is evidence of low farming standards.

Substantial changes giving incentive for further increases in agricultural production and sales are being made in the current five-year plan. Markups will be paid only for increases over the average annual level attained in the 11th Five-Year Plan. The markups on grain procurement prices have been increased to 100 percent. However, this is on the condition that state plans are fulfilled.

The markup remains the same (50 percent) for farms exceeding the last five-year plan's levels, but not fulfilling their plan. The list includes incentives for other products: onions, garlic, and alfalfa, clover and perennial grass seed. Also keep in mind that this year, for the first time kolkhozes, sovkhoses and other agricultural enterprises were authorized to sell, to consumer cooperative organizations and at kolkhoz markets, up to 30 percent of the planned purchase of potatoes, vegetables, melons, fruits and berries at contract prices. These sales will be counted towards plan fulfillment. The state is also giving incentives to improve product quality. For example, farms receive markups for delivering grain in better than base conditions. This grain is counted towards plan fulfillment.

However, many farm managers do not understand this. There are price deductions for poor quality grain and it does not count towards plan fulfillment. Drying and cleaning costs are deducted from grain with increased moisture and weed content. Farms lose sizable sums as a result of such deductions. The total reductions (deductions from plan fulfillment) in the republic were 4.9 million rubles. In addition, 1,529,000 rubles were retained from suppliers for grain drying and cleaning. Grain sales losses at the Orlovichi and imeni Chernyakhovskiy Sovkhozes in Dubrovenskiy Rayon were 87,000 and 45,000 rubles respectively, while at the Zarya Kolkhoz in Lioznenskiy and the Kolkhoz imeni Gastello in Sennenskiy Rayon they were 52,000 rubles each. At the same time the Kolkhoz imeni Lenin in Grodnenskiy Rayon received 248,000 rubles profit just from grain sales. The secret is in precise organization.

There are quite large potentials for improving production efficiency. For example, higher quality varieties of wheat, spring barley, oats and buckwheat receive 10 percent higher prices and oats for groat production 30 percent higher.

One feature of fiber flax is that it has several types of commercial products: straw, stock, fiber, and seed, all distinguished by production cost levels and each of them has a procurement price. Changes in the products procured, acting through prices and production costs, influence profit. The advantage remains with those flax growing kolkhozes and sovkhozes which deliver flax straw to flax procurement points. Fiber flax quality depends to a great extent upon the time it is sold. The existing procurement prices for flax straw and flax stock grades 1.25 and higher, delivered in July, are increased 20 and 30 percent, that delivered in September 15 and 25 percent, and in October 10 and 20 percent. Last year alone farms in the republic obtained an additional 2.6 million rubles for delivering flax products at early dates.

There are also increased incomes from the sales of the following flax varieties to the state: Orshanskiy-2, Vpered, Pskovskiy-359, "Progress", Svetoch, Shokinskiy, Mogilevskiy, Belinka. They are sold at prices with markups ranging from 5 to 15 percent. At the same time, some farms still lose considerable sums. Because of low quality flax products kolkhozes and sovkhozes in Bykhovskiy Rayon failed to receive 852,700 rubles.

Procurement prices for potatoes and vegetables also give incentives to growing and selling and quality. For example, the price for early potatoes is 2-3 fold higher than that of late ones. This permits farms to earn up to 5,000 rubles per hectare from early potatoes, while they only obtain 2,500 rubles per hectare for late table potatoes.

Especially high incomes from early potato sales are obtained by the Sovkhoz Krasnoye in Molodechnenskiy Rayon, the Sovkhoz imeni Leninskiy Komsomol in Bobruyskiy Rayon, the Krasnyy Oktyabr Kolkhoz in Stolbtsovskiy Rayon and others. Keep in mind that the price for late table potatoes is also differentiated by delivery period. The best prices are paid for these varieties of late table potatoes: Temp, Ogonek, Kandidat, Razvaristyy, Gatchinskiy, Detsko-selskiy, Zhitomiryanka, Olev and Komsomolets.

When selling the state nonstandard potatoes many farms bear sizable losses due to 28 percent price reductions. Farms in Polotskiy Rayon alone which, in 1985 had 6.6 percent of their potatoes graded nonstandard, lost more than 25,000 rubles for this reason, while farms in Bykhovskiy Rayon lost 44,400.

Markups of up to 35 percent are also paid for selling the state Amager-611 cabbage. Or take cucumbers, for example. The delivery of 3-7 centimeter long cucumbers has incomparable advantages, while there are up to 50 percent price reductions for nonstandard cucumbers.

All this indicates that the proper use of price deductions will help many farms obtain sizable profits. However, this occurs where there are proper farming practices and concern about gathering and selling the harvest. Receiving the harvest directly at kolkhozes and sovkhoses has an especially positive effect.

The level of economic work at kolkhozes and sovkhoses is also an important factor in this. Efficiency is not high where nobody thinks about prices or even makes the proper calculations. In addition to losses from low quality agricultural products, many farms lose sizable sums due to calculation errors by procurement organizations. In 1985 price formation organs alone returned about 1 million rubles to the republic's farms. The most frequent violations are improper use of procurement prices, nonpayment of transportation costs and markups and reduced quality. For example, the Polotskiy Flax Plant obtained 30,000 rubles too much from farms in settling accounts. The Pukhovichskiy Grain Products Combine underpaid farms by 69,500 rubles, the Uzdenskiy Gormolzavod did not compensate for 7,000 rubles worth of transportation costs and the Volkovysskiy Meat Combine underpaid kolkhozes 21,900 rubles.

Improvements in agricultural production efficiency depend to a great extent upon solutions to questions in increasing the sales of agricultural products, improving quality, strengthening control over the observation of state price discipline in in agro-industrial complex sectors.

11574

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## AGRO-ECONOMICS AND ORGANIZATION

### TERMS OF RSFSR ECONOMIC EXPERIMENTS EXPLAINED

Moscow EKONOMICHESKAYA GAZETA in Russian No 32, Aug 86 p 11

[Article by V. Chupeyev, economist: "The Guideline -- Final Results: On the Conditions of the Experiment on Perfection of Management and Stimuli of Sovkhoz Workers"]

[Text] It was stated in the 27th CPSU Congress Political Report that genuine cost accounting and the dependence of enterprise income upon final results should become the norm for all elements in the agro-industrial complex, above all kolkhozes and sovkhozes. The contract and job plus bonus system are becoming widespread at the level of brigade, link and family with means of production, including land, attached for a contracted period.

An economic experiment to improve management and material incentives to sovkhoz workers is being conducted in Stavropol Kray, Volgograd Oblast and in the following rayons: Glazunovskiy in Orel Oblast, Kilenskiy in Kuybyshev, Pritobolnyi in Kurgan, Ordynskiy in Novosibirsk, Krivosheinskiy in Tomsk Oblast and Aleyskiy Rayon in Altayskiy Kray.

One of the experiment's most important directions is the introduction of cost accounting contract relations at all levels on farms.

#### The Conditions for Workers

Brigades, detachments, links, individual workers in plant and animal production, and also families can be put on contract. Contracts are the same for all levels, independently of what is being switched to the new form for labor organization and payment -- brigade, worker or family. This does not involve any sort of newcomer families, as is sometimes mistakenly assumed, but families of kolkhoz or sovkhoz workers. Experience shows that the family contract is very effective in animal husbandry.

It is very important that entire farms be switched to agricultural contract, and not just individual brigades, workers or families (so they won't look or feel as if they are in a special situation). The question as to what should be

the combination of organizational forms -- brigade, family, or individual -- can only be solved on the spot, based upon socioeconomic, production, natural and other conditions at a given farm and its units. In any case, the switching should be strictly voluntary.

As a rule, a farm concludes a several year contract with farm workers who have switched to contract (henceforth, for brevity's sake called contractors).

In crop production one or several crops, or the entire crop rotation can be attached to contractors, in animal husbandry -- one or several groups of animals. Agricultural animals attached to contractors can be located not only in buildings belonging to the farm, but in workers' household structures. Groups of animals and, if necessary, agricultural land for feed production and preparation are attached to contractors. All this is included in the contract.

Depending upon what sector contractors are working in and what is attached to them, they are given annual, seasonal or period production norms. Contractor work efficiency depends upon how well based these norms are, as they determine the relationship between income and labor contribution.

Production norms are based upon estimated crop yields, animal productivity, taking technology and production conditions into account and set from indicators obtained in the previous five years. However, this must not be a simple arithmetic average of indicators, but be done so that yield, productivity and labor productivity upon which a norm is based will not only not be lower than levels attained in preceding years, but reflect reserves for growth.

#### Pay by Evaluations

Contractors' production labor is paid according to evaluations made on the basis of normative volume and payments funds for work producing such output, increased from 125 to 150 percent.

Contractors' labor is paid only within the limits of output production norms set for it. The wages fund is determined according to existing norms and evaluations based upon the completion of work necessary to produce a normative volume of output (independent of the actual number of contractors). Limits on material outlays (fuel, lubricants, etc.) are based upon existing norms.

Contractors pay the farm for outlays above established limits except in those cases where overconsumption was not due to contractors and was not due to production above established norms. Compensation is at plan prices (norms). Up to 70 percent of material resource savings are given to workers if they fulfill production norms.

The main feature of agricultural contracts is that output obtained above set production norms completely or partially remains at the contractors' disposal. This output is distributed among collective members at their discretion. Contractors are not paid wages for output produced above the norm.

If not all output produced above the established norm remains at contractors' disposal, their limits for material resources are corrected in a manner provided for by the contract.

Contractors can exchange with the farm various types of products they produce in appropriate quantities (by contract). Farms are obligated to purchase output remaining at contractors' disposal in the volumes the latter wants to sell, and at contracted prices, but not higher than purchase prices.

Farm managers and specialists should monitor the condition of equipment and agricultural animals transferred to contractor. Depending upon the production process the former should exercise consultant functions.

Farms are also obligated to organize material-technical supply to contractors in accordance with contractual obligations, receive, store, process and sell output at normative volumes, give help in the storage, transportation and sales of output at contractors' disposal, organize work (according to contract) which requires centralized and coordinated labor and create the required social and living conditions for workers.

The labor of sovkhos management workers, specialists and employees is paid at evaluations for each 1,000 rubles or quintal of basic types of agricultural products sold. For department (farm, shop, section) management workers, specialists and employees evaluations are made for output produced rather than sold.

Evaluations are based upon average annual sales volume, and for departments, farms, sections and shops, for agricultural production attained in the previous five years, and the annual sum of wages paid to positions established by the staffing schedule, including vacant positions (depending upon the average annual level of agricultural production attained in the preceding five years). When evaluations are made per quintal, the annual wages fund for management workers, specialists and employees is distributed proportionally to the share of each product sold in the total volume.

Evaluations per 1,000 rubles or per quintal of product sold (produced) can be made collectively for all management workers, specialists and employees in farm (department, farm, section shop) administrations or groups of workers indicated.

If it is impossible to pay management workers, specialists and employees on a monthly basis for output, the final calculation is made for the year's results. Every month they are given advances amounting to 80-90 percent of the pay for their position.

Output sold (produced) above the average annual level for the preceding five years is paid at increased (up to 100 percent) evaluations. The exact size of the advances and increase in evaluations is determined by rayon agro-industrial associations depending upon the use intensiveness of land, fixed capital and other factors characterizing production. No bonuses are given for sales growth.



The difference (supplementary payment) between evaluation based allocations of total wage payments and the advanced paid throughout the year can be distributed by a labor participation factor.

Total payments for the labor of management workers, specialists and employees over the established payments for their positions does not include limit sums on allocations for maintaining the management apparatus.

These conditions for the experiment are supplemented by the CPSU Central Committee and USSR Council of Ministers decree on improving the economic mechanism in the APK.

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## AGRO-ECONOMICS AND ORGANIZATION

### APK SCIENTIFIC INSTITUTIONS FAULTED FOR INEFFICIENCY

Moscow EKONOMICHESKAYA GAZETA in Russian No 31, Jul 86 p 10

[Article by N. Annenskaya, chief economist for the Financial Administration of the APK for RSFSR Ministry of Finances: "Under an Obligation to the Fields; On the Work Efficiency of the APK Scientific Institutions"]

[Text] Within our country there are many different types of scientific-research institutes engaged in agricultural matters. The state is expending tremendous resources for the development of the agricultural science. However, the return from such work is still low. This was emphasized in particular during zonal conferences, where discussions took place on such subjects as the introduction of intensive technologies, the collective contract and cost accounting in kolkhoz and sovkhoz production operations.

In the Russian Federation alone, three VASKhNIL /All-Union Academy of Agricultural Sciences imeni V.I. Lenin/ branches with 116 scientific institutes are in operation. There are more than 21,000 workers employed at these facilities. Each year, more than 70 million rubles are spent for the maintenance of these scientific institutes. And these expenses are being covered mainly by means of budgetary appropriations.

#### Without Direction

One reason for the insufficient effectiveness of scientific studies lies in the fact that a concentration of resources in the more important areas is not always ensured. Thus the scientific institutes of the All-Russian branch of VASKhNIL spent considerable budgetary funds for local matters instead of concluding economic contracts for the carrying out of such work. Proper control is lacking over fulfillment of the plans for scientific studies and introducing the results of such work into production operations. At times the studies are carried out in the absence of coordination of the plans for economic contractual work with the agricultural organs. Duplication of themes and a concentration of efforts on individual matters of secondary importance are being tolerated, the schedules for the carrying out of studies are being dragged out and quite often the problems are being solved in an incomplete manner. All of this serves to lower the economic effectiveness of the work being performed by the scientific institutes.

Approximately 300 million rubles were allocated for developing the logistical base and for improving social conditions for workers attached to experimental-production farms throughout the republic during the 1981-1985 period. The power-worker ratio per individual worker is 48 horsepower and the value of the productive capital per 100 hectares of agricultural land reached 90,000 rubles. However, the level of development of production operations at many of these farms is still not very high. The majority of them do not serve as models for the raising of elite seed or pedigree animals. Quite often their indicators are no higher than those of traditional commodity farms.

Moreover, in many instances the cropping power of the crops and the livestock productivity are lower at these facilities than the average for the rayon in which they are located. Here is just one example. At the Rossiya Experimental Farm of the All-Union Scientific Research Institute for Irrigation Farming, only 35 quintals of potatoes per hectare were harvested on the average during the past five-year plan, a figure which is considerably lower than that for the rayon. Indeed, they experienced difficulty in obtaining even this miserly yield!

The experimental-production farms of the All-Russian Branch of VASKhNIL do not fulfill their plans every year for the production and sale of grain, sunflowers or wool or their tasks for the sale to kolkhoz and sovkhozes of elite seed and the first reproduction of spring wheat, barley, pulse crops or clover. Of ten farms of scientific institutes associated with the branch, engaged in clover seed production, only a few are fulfilling their plans for the sale of seed for high reproductions.

And here is still another scandalous fact. The VNII /all-union scientific-research institute/ for the Agricultural Use of Reclaimed Lands and the Volga NII /scientific research institute/ for Livestock Breeding and Feed Production have tolerated a reduction in the agricultural crop yields obtained from irrigated and drained lands.

In order to raise the operational effectiveness of scientific institutes included in the USSR Gosagroprom system, it is our opinion that their work should be reorganized radically and that VASKhNIL should be oriented towards solving the more important strategic tasks. Indeed, the functions of the territorial branches of VASKhNIL have been clearly defined. They have been tasked with developing optimum relationships for branch and territorial administration of agroindustrial production, improving planning, developing an efficient production structure for the agroindustrial complex and strengthening inter-branch relationships in the interest of achieving the highest final results.

The scientists must point out the means for reducing the resource-intensiveness of production operations. Meanwhile, at the present time the experimental-production farms themselves have not achieved any positive advances or progress in this area. For example, the indicators for output-capital ratio at the OPKh /experimental model farm/ of the All-Russian Branch of VASKhNIL declined by 19 percent. Gross agricultural output per 100 rubles of fixed productive capital was 22 percent lower here than at sovkhozes of the republic's former Minselkhos /Ministry of Agriculture/.

The experimental farms are not serving as models in the matter of raising labor productivity. The rates of growth for wages at these farms are exceeding the rates of growth for labor productivity by 5.3 points. The low level of economic operations on these farms and the slow introduction of leading technologies and a scientifically sound normative base are factors which are bringing about a rise in the cost of output. During the 11th Five-Year Plan and compared to the 10th, at the OPKh of the All-Russian Branch of VASKhNIL, the production cost for grain increased by 71 percent, potatoes and milk -- by 27, weight increases in young cattle stock -- by 33 and in hogs -- by 25 percent.

The presence in the structure of experimental-production farms of a number of unprofitable enterprises is a direct result of a low level of production management. It was by no means an accident that some of them were added to the list of low-profitability and unprofitable farms for the purpose of obtaining bonuses added on to the purchase prices for products sold to the state.

The problems confronting the experimental-production farms are closely associated with specific production conditions. Thus the management of the republic branches of VASKhNIL must concern itself with their development. It must also direct the development and mastering of scientifically sound systems for farm management and solve the problems concerned with production specialization and concentration, the integration of agriculture with the processing industry and strengthening the logistical base for the storage, processing and transporting of products.

#### Closer To Production

A strong scientific potential has been created within the APK system. However, up until now the link between science and production has been weak. Years pass from the moment results are realized in laboratories or on the plots of experimental farms until they are introduced into production operations. This is simply unacceptable. In order to strengthen the link between science and production, the agroindustrial committees, jointly with the VASKhNIL branches, must define the leading scientific institutes in the various areas, the principal task of which will be the organization of scientific support for the development of agro-industrial production and their leaders should ideally be assigned to serve as the deputy chairmen of the respective agroindustrial committees and as chairmen of the scientific-technical councils.

What will be the direct responsibilities of the leading scientific institutes? They will be responsible for developing long-term and special purpose all-round programs for scientific studies and plans for the utilization of scientific and engineering achievements. Further, it is our opinion that the zonal scientific-research institutes must develop regional scientific-technical programs and plans for the introduction of completed studies and they must coordinate the work of higher educational institutes and the scientific institutes of other ministries and departments which participate in the carrying out of these programs.

Such reorganization in the science of agriculture is impossible in the absence of appropriate strengthening of the logistical base for the scientific organizations and institutes or a radical change in the methods for training

personnel. A number of questions have arisen in connection with the financing of scientific works. During the next few years, USSR Gosagroprom, jointly with VASKhNIL, should carry out the conversion of scientific institutes over to the cost accounting system for work organization, with payments being made to them following the completion of an entire cycle of studies. This will raise responsibility for the quality of the works recommended for introduction into operations.

In our opinion, the scientific organizations and institutes must carry out production checks, ensure the implementation of new developments in the form of leading technologies, plans, systems and means of production at experimental-production, training-experimental and base enterprises and carry out the coordination of completed works with the specific production conditions. In addition, they must be entrusted with responsibility for exercising author's supervision and also for publicizing the achievements of scientific-technical progress.

In order to raise the interest of farm leaders in introducing leading methods into operational practice, a system must be developed which holds them responsible for fulfilling the planned indicators for the principal activity and also the plan for introducing scientific-technical achievements into operations.

There are many skilled scientific personnel within the USSR Gosagroprom system. However, the existing system for paying them for their work stimulates to only a weak degree improvements in the effectiveness of their studies or works or an acceleration in introducing them into production operations. In order to eliminate this shortcoming, the rights of the leaders of scientific organizations with regard to establishing the rates of pay for workers must be expanded considerably. In particular, the pay rates for corresponding workers at sovkhozes and other state agricultural enterprises should apply also for workers at experimental, training-experimental and other farms of scientific-research institutes, higher and secondary specialized institutes and scientific-production associations which lack an independent balance

In order to instill material interest in scientists in the introduction of scientific and engineering achievements into agricultural production, bonuses must be added on to payments made for the carrying out of more complicated work and also for carrying out work at kolkhozes, sovkhozes, experimental and other enterprises in connection with the introduction of scientific-technical achievements and leading experience.

In order to strengthen the financial base of VUZ's within the agro-industrial complex system, their rectors should ideally be authorized to create economic incentive funds using the following sources:

- withholdings from the profits of training-experimental farms and other cost accounting enterprises subordinate to the VUZ's, depending upon the economic effectiveness of the scientific works introduced into operations;
- planned savings in an amount up to 20 percent of the cost of the work carried out by the VUZ's in accordance with economic contracts with clients.

-- withholdings from the value of fundamental and research studies conducted by VUZ's in accordance with economic contracts with clients.

In order to raise the interest of workers, including students and post graduate workers at educational institutes, in introducing the results of scientific studies into managerial practice, we believe the use of a portion of the wage fund for issuing bonuses to them should be authorized.

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## AGRO-ECONOMICS AND ORGANIZATION

### NEW WAGE SYSTEM FOR FARM SPECIALISTS, MANAGERS EXPLAINED

Moscow SELSKAYA ZHIZN in Russian 12 Aug 86 p 2

Article by V. Zhurikov, chief of the Administration for Labor Organization and Wages of USSR Gosagroprom: "A Contract: Earnings of a Specialist"/

Text The collective contract is being employed more extensively at kolkhozes and sovkhozes. Along the path to mastering this progressive form, one particular question arises quite frequently: with the earnings of rank and file farmers and livestock breeders being dependent upon the quantity, quality and production costs of the products produced, why is it that these same principles are not being extended to include leaders and specialists? Truly, up until recently their work was paid for in accordance with official rates. The amount of payment did not decrease even if a reduction took place in the volume of goods sold.

Such a system did not interest the leaders and specialists in increasing their production of goods. It restrained the development of contractual and cost accounting principles in the rural areas and it aroused criticism among kolkhoz members and workers.

The situation changed radically following the appearance of the decree of the party and government entitled "On Further Improvements in the Economic Mechanism for Management Within the Country's Agro-industrial Complex." Today the wages for these workers are based upon rates per thousand rubles worth of products sold (gross). In other words, the earnings for workers, leaders and specialists are computed depending upon the final results of management. Favorable conditions are being created for introducing contractual and cost accounting principles into operations not only in individual intra-organizational subunits but also at enterprises on the whole.

The mastering of these principles involves several important aspects. One such concern is just who will be converted over to wages based upon products produced? At kolkhozes, this is determined by the administration or during a general meeting. At sovkhozes, the new system is mandatory for all administrative personnel and agreement is required only from those specialists whose official salary is less than 130 rubles.

As a rule, the rates for output should ideally be collective in nature. That is, they should be determined for all of the leaders, specialists and workers

at a sovkhos, branch, department, farm or sector. The total amount of earnings for computing the rates is based upon the official rates for the particular workers for the given year.

Importance is attached to accurately determining the final result that is to be taken into account. For workers carrying out their official duties on the whole at a sovkhos, the sales volume for agricultural products achieved during the preceding five years serves as just such a criterion. The rates for leaders and specialists responsible for field crop husbandry and livestock husbandry operations can be established for each branch separately. In the case of middle echelon personnel, the average annual volume of agricultural products produced by a given department (brigade, farm, shop, sector) during the preceding five-year period is taken into account.

The following circumstance must be borne in mind. When determining the average annual volume of products sold, figures taken from the annual reports are used for the most part. Owing to the change in purchase prices commencing in 1983, a need exists for recalculating the data only for the 1981-1982 period. For this period, the volume of products sold is computed in accordance with the state purchase prices for that year for which the rate for the products was established. The volume of goods produced, both for the preceding five years and for the year being reported upon, is determined taking into account its quality in accordance with the existing state purchase prices.

When developing material incentive measures, the specific work of each farm is taken into account. For example, if a kolkhoz or sovkhos is engaged in the industrial processing of farming and livestock husbandry products, then for the purpose of raising the interest of its leaders and specialists in increasing the production volumes and improving the quality indicators, their work should be paid for based upon a consideration of the sales volume for products processed. This output must be evaluated according to the actual sales prices and the cost of the raw materials and other materials purchased must be eliminated from the total sales amount.

At poultry factories, livestock husbandry complexes and other highly specialized farms, the rates can be established for a quintal (thousand units) of products sold or produced. Certainly, with the quality of the products being taken into account. The placing in operation of new capabilities by means of contractual construction, as called for in the plan for the current year and the planned schedules for mastering these capabilities are taken into account and in the process the sales (production) volume for output is increased. And what would the situation be like if the volumes for the production and sale of products, as called for in the plan, were achieved or exceeded at a large livestock husbandry complex, poultry factory or on reclaimed lands. Here the output rates can be established -- with the consent of the leader of a higher organization -- based upon the indicators called for in the plan.

Prior to a computation for output, leading workers, specialists and office workers can be paid an advance in the amount of 80 percent of their official salaries. An exception would be those sovkhoses and kolkhozes at which the products are produced uniformly throughout the year. Here the rate computations must be carried out monthly.



The earnings of leaders, specialists and office workers are computed based upon the annual operational results, with use being made of the established rates for the actual amount of products sold (produced). The overall amount of additional payments is determined by deducting the advance paid out during the year's time from the computed amount. The additional payments are distributed among the workers proportional to the advance paid out. In the process, more extensive use should be made of the experience of those farms which utilized the coefficient of work participation, an indicator which has proved its worth in operational practice. A statute on use of the KTU /koeffitsiyent trudovogo uchastiya; coefficient of work participation/ is developed by a sovkhoz administration jointly with the trade union committee and it is approved with agreement by the labor collective.

Still another aspect is of equal importance. For the entire increase in the production and sale of products (including that obtained during the reporting year through the introduction of new capabilities, implemented using the economic method, modernization and the introduction of new technologies), the earnings for leaders and specialists are computed also in accordance with the rate established initially for the products. In this manner, material interest in constantly searching for reserves for achieving better management is ensured.

During the formation of contractual collectives, a need often arises for including specialists in their structure. In such cases, the annual wage fund for specialists is taken into account when determining the output rates established for a brigade or team. The awarding of bonuses to them is carried out in the same manner as that prescribed for a contractual collective. An advance is paid out to specialists in the amount of 80 percent of the established official salary.

It is also noted that commencing this year the work performed by workers attached to RAPO's /rayon agroindustrial associations/, the gosagroproms of autonomous republics and oblast and kray agricultural committees will be paid for based upon output rates. The rate computations are carried out in the same manner as those for farms. Moreover, the sales volumes not only for agricultural products but also for products processed and produced by processing enterprises subordinate to RAPO's and agricultural committees are taken into account. Prior to the final computation for output throughout the year, an advance in the amount of 90 percent of the established official salary is paid out to these workers.

Thus another step has been taken towards ensuring that the system of material incentives is aimed at motivating all workers towards achieving the best final results.

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## FORESTRY AND TIMBER

### PLYWOOD INDUSTRY PROBLEMS PROBED

Moscow LESNAYA PROMYSHLENNOST in Russian 17 Apr 86 p 2

[Article by V. Prokhorov, deputy chief of the Industrial Administration for Wallboard Production of the USSR Ministry of Timber, Pulp Paper and Wood Processing Industry: "A Test for Plywood Workers"]

[Text] The plywood industry, unfortunately, has been solidly entrenched amongst the laggards. In the last two years, it's true, the industry has succeeded in stopping its annual decrease in the output of plywood. In the second half of the five-year plan its production was 191,000 cubic meters greater than in the first half. However, to sum up, this sub-branch fell short by more than one million cubic meters of its primary product for the past five years. All this provides great food for thought in analyzing the state of affairs.

To a certain extent there has been a rejuvenation in the plywood workers' output in 1984 and 1985 which, I think, took place for the most part as a result of a changeover in planning and in having production statistics as double-entry calculations--in square and in cubic meters. For the period of this experiment the average plywood thickness decreased by six percent which allowed for a decrease in the consumption of raw materials in 1983 of 163,000 cubic meters, and in 1984 and 1985 amounted to a 360,000 cubic meters savings annually. This successfully stabilized the work at the Okenaskiy plant and the Murom combine, the "Baykal" veneer stock combine and the "Vulkan" woodworking combine.

However, up to the present, Gosplan USSR has not adopted a new method of planning and calculating and there is no appropriate operational system for formulating a plan for delivery and distribution of products. As before it is oriented on "cubes." The time has come at last to introduce a common index, both for manufacturers and consumers of plywood. I think that such an index should be square meters.

As before, the problem remains of providing the sub-branch with raw materials. Average undershipments annually amount to 700,000 cubic meters which equates to a loss of 250,000 cubic meters of plywood. Measures have been taken to tighten delivery discipline, to introduce a grading service, and to control selection of plywood raw materials at lumbering and timber floating enterprises. The ban on using birch timber, suitable for the manufacture of veneering blocks and in the production of other grades, has not provided substantial improvement. As a result the enterprises have simply existed as before and lost qualified workers and engineers.

There is an acute need for effective measures to stimulate timber workers to fulfill the delivery plan for plywood raw materials. When calculating the seasonal fluctuation of procurements, it is necessary to plan for 45 percent of the annual plywood raw materials task for the January-April period.

Technicians at the enterprises must provide for the possibility of processing annually up to 10 percent of aspen and conifers and efficiently develop methods to manufacture plywood from the various types of wood. Specialists would be wise to study the experiences of the Cherepovets and Velikoustyug combines which are ignorant of such a thing as overexpenditure of raw materials, especially when we consider that in the past year the sub-branch had an excessive consumption of 40,800 cubic meters. In the last five-year plan production was successfully expanded in machine building and construction.

In 1985 280,000 cubic meters of large format plywood were manufactured, or more than twice that in the beginning of the 11th Five-Year Plan. Beginning in 1983 annual production of laminated plywood was about 6,000 cubic meters, and as much again for veneered slabs having a thickness of 28 millimeters used as container planking. However, the production of such cost-saving types of plywood products is still clearly insufficient. In order to satisfy the demand for them, apart from filling a specific physical need, it is necessary to reshape the psychology of enterprise managers who strive to produce only traditional types of plywood.

The decrease in the role of manual labor at sub-branch combines has been slow. In the last five years there has been a failure to develop and put into practice mechanical devices for such labor consuming operations as sorting veneer sheets and finished products. As a result technical labor requirements in the manufacture of a cubic meter of plywood for the five-year plan decreased by only 0.4 man hours and the level of mechanization amounted to only 53 percent.

There must be a widespread introduction of the brigade form of organizing labor to help this matter. The industry has its own standards. At the Perm plywood combine, for example, the productivity of labor for women sorters of veneer sheets rose after combining them in a work brigade by 2.6 percent. This index of an all-embracing work crew in

feed advance and steaming of raw materials and the stripping of veneer sheets at the Zheshart combine increased by 8.6 percent. At "Krasnyy Yakor" per worker output in sorting of plywood rose by 9-10 percent. However, organizations are still quite reluctant to comply with these examples.

For three years advanced schools have been operating in Cherepovets, Perm and Slobodskoy where hundreds of specialists have been trained and the return has almost been nil. This can be explained by a substantial gap between the achievements of the advanced workers and the indices of those who lag behind. The productivity of the stripping equipment, for example, wavers between 1.9-3.8 cubic meters per hour in the sub-branch and gas driers from 1.69-4.48 cubic meters an hour (calculated for conventional veneer sheets 1.5 millimeters thick). This is where the extra resources are!

The plywood industry anticipates great returns from the plywood industry's Scientific Production Association "Nauchfanprom." Meanwhile this organization's low technical level can be characterized by second-rate themes and delayed development. For example, more than 15 years have been spent on plans for the subject of developing new types of plywood which provide for the complete utilization of raw materials--the so-called edgewise plywood, which in the middle layer not only uses fragments but flawed veneer sheets, or waste products, as well. It was only in 1985 that the corresponding equipment was installed at the Manturovo plywood combine, but it is still in the experimental stage. This is a great number of such examples.

The 27th CPSU Congress observed that it was necessary to substantially raise the level and the results derived from the branch's science and constantly improve the engineering and technology of production. Plywood scientists must in the shortest time seriously reorganize themselves in order to work under time constraints. Otherwise the lagging behind in this branch will not be made up for.

Much has to be done. Production volumes must grow by one-fourth, the output of large-formatted plywood must double and the manufacture of laminated plywood must reach 100,000 cubic meters annually. This strenuous task may not be fulfilled with the load of yesterday's problems. Among the most important matters is the technical re-equipping of 22 plants and the introduction of the capability to process 145,000 cubic meters. At the same time, 29 enterprises will exchange worn out line equipment and plant units which will provide for increased production and mechanization of labor-consuming processes. For the purpose of technical retooling, 55 percent of planned capital investment has been allocated.

This will not be a simple restoration of production but an introduction of technology to provide for the greatest economic and social effect. In particular, the changeover of a number of plants to work with fully formatted veneer sheets will allow for maximum mechanization of labor consuming manual operations. In just the stack assembly section the productivity of labor will double.

I think that in order to increase the productivity of labor and the complex utilization of wood at plywood plants, where currently there are no facilities to manufacture wallboard, it would be advisable to build shops to produce narrow (3-6 millimeters) wood fiber slabs of the "Mende" sort and use them for Plywood output from one cubic meter of raw materials would increase, thanks to this, by 1.8 times, and the amount of waste products would decrease by three times.

Plans call for the complex mechanization of raw material storage facilities based on wheeled loaders, the introduction of mechanical arms in the processing of raw materials, drying, sorting veneer sheets, in stack assembly, sorting and finishing of plywood, and power-driven and nonmotor driven roller conveyers to be used for internal shop transport. The automated systems based on micro-computers will provide information on how best to allocate blocks so that the output of veneer sheets might be at a maximum, will use unseeing eyes to observe defects and will assume control over maintaining the technological operations.

We see that the reconstruction program outlined for the branch is extensive. And now it is important not to lose time as often happened in the past. We must be business-like and purposefully realize what has been outlined. We must overcome antiquated approaches and not wait to be pushed, but take action. Leading the branch on to high-quality new limits--this is the purpose of the decisions of the 27th Party Congress aimed at the plywood industry.

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